

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 07205214  
PUBLICATION DATE : 08-08-95

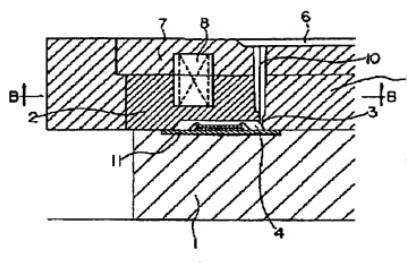
APPLICATION DATE : 12-01-94  
APPLICATION NUMBER : 06013974

APPLICANT : PACK VISION:KK;

INVENTOR : SHIMADA YOSHIHIRO;

INT.CL. : B29C 45/38 B29C 45/02 B29C 45/14  
B29C 45/26 H01L 21/56 // B29L 31:34

TITLE : MOLD FOR BALL GRID ARRAY



**ABSTRACT :** PURPOSE: To obtain a ball grid array in which a mark of a gate on a sealing resin is inconspicuous and which has a good appearance by forming a runner by a mold cavity and a gate block, providing the gate on a slant face of the sealing resin and pushing down the mold cavity while cutting the gate when a mold is opened.

CONSTITUTION: An integrated circuit, a bonding wire and a copper pattern on a printed circuit substrate 11 are sealed by transfer-molding a thermosetting resin. In this sealing, a perpendicular runner 10 is formed by two bodies of a mold cavity 2 and a gate block 9, and a side face of a sealing resin is formed into a shape of a slant face on which a gate 3 is provided. In moving the mold cavity 2 to open a mold, the gate 3 is cut off. By this method, the mold cavity 2 is pushed down by a spring 8. When the mold is opened, the gate portion is automatically cut off and, accordingly, work of cutting off the gate from a semifinished product, which has been resin-sealed, is not necessary after molding.

COPYRIGHT: (C)1995,JPO